5 V

PCT

RAW SEQUENCE LISTING DATE: 07/05/2001
PATENT APPLICATION: US/09/700,696A TIME: 10:42:17

Input Set : A:\PTO.txt
Output Set: N:\CRF3\07052001\I700696A.raw

ENTERED

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     4 <110> APPLICANT: Rowe, Peter
     6 <120> TITLE OF INVENTION: A Novel Polypeptide Hormone Phosphatonin
     9 <130> FILE REFERENCE: VOSS001
    11 <140> CURRENT APPLICATION NUMBER: US 09/700,696A
C--> 12 <141> CURRENT FILING DATE: 2001-06-12
    14 <150> PRIOR APPLICATION NUMBER: PCT EP99/03403
    15 <151> PRIOR FILING DATE: 1999-05-18
    17 <150> PRIOR APPLICATION NUMBER: GB 9810681.8
    18 <151> PRIOR FILING DATE: 1998-05-18
    20 <150> PRIOR APPLICATION NUMBER: GB 9819387.3
    21 <151> PRIOR FILING DATE: 1998-09-04
    23 <160> NUMBER OF SEQ ID NOS: 25
    25 <170> SOFTWARE: FastSEQ for Windows Version 4.0
    27 <210> SEQ ID NO: 1
    28 <211> LENGTH: 1655
    29 <212> TYPE: DNA
    30 <213> ORGANISM: Homo sapiens
    32 <400> SEQUENCE: 1
    33 gtgaataaag aatatagtat cagtaacaaa gagaatactc acaatggcct gaggatgtca      60
    34 atttatccta agtcaactgg gaataaaggg tttgaggatg gagatgatgc tatcagcaaa     120
    35 ctacatgacc aagaagaata tggcgcagct ctcatcagaa ataacatgca acatataatg     180
    36 gggccagtga ctgcgattaa actcctgggg gaagaaaaca aagagaacac acctaggaat     240
    37 gttctaaaca taatcccagc aagtatgaat tatgctaaag cacactcgaa ggataaaaag     300
    38 aagcctcaaa gagattccca agcccagaaa agtccagtaa aaagcaaaag cacccatcgt     360
    39 attcaacaca acattgacta cctaaaacat ctctcaaaag tcaaaaaaat ccccagtgat     420
    40 tttgaaggca gcggttatac agatcttcaa gagagagggg acaatgatat atctcctttc     480
    41 agtggggacg gccaaccttt taaggacatt cctggtaaag gagaagctac tggtcctgac     540
    42 ctagaaggca aagatattca aacagggttt gcaggcccaa gtgaagctga gagtactcat     600
    43 cttgacacaa aaaagccagg ttataatgag atcccagaga gagaagaaaa tggtggaaat     660
    44 accattggaa ctagggatga aactgcgaaa gaggcagatg ctgttgatgt cagccttgta     720
    45 gagggcagca acgatatcat gggtagtacc aattttaagg agctccctgg aagagaagga     780
    46 aacagagtgg atgctggcag ccaaaatgct caccaaggga aggttgagtt tcattaccct     840
    47 cctgcaccct caaaagagaa aagaaaagaa ggcagtagtg atgcagctga aagtaccaac     900
    48 tataatgaaa ttcctaaaaa tggcaaaggc agtaccagaa agggtgtaga tcattctaat     960
    49 aggaaccaag caaccttaaa tgaaaaacaa aggtttccta gtaagggcaa aagtcagggc    1020
    50 ctgcccattc cttctcgtgg tcttgataat gaaatcaaaa acgaaatgga ttcctttaat    1080
    51 ggccccagtc atgagaatat aataacacat ggcagaaaat atcattatgt accccacaga    1140
    52 caaaataatt ctacacggaa taagggtatg ccacaaggga aaggctcctg gggtagacaa    1200
    53 ccccattcca acaggaggtt tagttcccgt agaagggatg acagtagtga gtcatctgac    1260
    54 agtggcagtt caagtgagag cgatggtgac tagtccacca ggagttccca gcggggtgac    1320
    55 agtctgaaga cctcgtcacc tgtgagttga tgtagaggag agccacctga cagctgacca    1380
    56 ggtgaagaga ggatagagtg aagaactgag tgagccaaga atcctggtct ccttgggggа    1440
    57 atttttgcta tcttaatagt cacagtataa aattctatta aaggctataa tgtttttaag    1500
    58 caaaaaaaaa tcattacaga tctatgaaat aggtaacatt tgagtaggtg tcatttaaaa    1560
    59 atagttggtg aatgtcacaa atgccttcta tgttgtttgc tctgtagaca tgaaaataaa    1620
    60 caatatctct cgatgataaa aaaaaaaaaa aaaaa                               1655
    62 <210> SEQ ID NO: 2
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Input Set : A:\PTO.txt
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63 <211> LENGTH: 430
64 <212> TYPE: PRT
65 <213> ORGANISM: Homo sapiens
67 <400> SEQUENCE: 2
68 Val Asn Lys Glu Tyr Ser Ile Ser Asn Lys Glu Asn Thr His Asn Gly
69  1               5                  10                  15
70 Leu Arg Met Ser Ile Tyr Pro Lys Ser Thr Gly Asn Lys Gly Phe Glu
71             20                  25                  30
72 Asp Gly Asp Asp Ala Ile Ser Lys Leu His Asp Gln Glu Glu Tyr Gly
73         35                  40                  45
74 Ala Ala Leu Ile Arg Asn Asn Met Gln His Ile Met Gly Pro Val Thr
75     50                  55                  60
76 Ala Ile Lys Leu Leu Gly Glu Glu Asn Lys Glu Asn Thr Pro Arg Asn
77 65                  70                  75                  80
78 Val Leu Asn Ile Ile Pro Ala Ser Met Asn Tyr Ala Lys Ala His Ser
79                 85                  90                  95
80 Lys Asp Lys Lys Lys Pro Gln Arg Asp Ser Gln Ala Gln Lys Ser Pro
81             100                 105                 110
82 Val Lys Ser Lys Ser Thr His Arg Ile Gln His Asn Ile Asp Tyr Leu
83         115                 120                 125
84 Lys His Leu Ser Lys Val Lys Lys Ile Pro Ser Asp Phe Glu Gly Ser
85     130                 135                 140
86 Gly Tyr Thr Asp Leu Gln Glu Arg Gly Asp Asn Asp Ile Ser Pro Phe
87 145                 150                 155                 160
88 Ser Gly Asp Gly Gln Pro Phe Lys Asp Ile Pro Gly Lys Gly Glu Ala
89                 165                 170                 175
90 Thr Gly Pro Asp Leu Glu Gly Lys Asp Ile Gln Thr Gly Phe Ala Gly
91             180                 185                 190
92 Pro Ser Glu Ala Glu Ser Thr His Leu Asp Thr Lys Lys Pro Gly Tyr
93         195                 200                 205
94 Asn Glu Ile Pro Glu Arg Glu Glu Asn Gly Gly Asn Thr Ile Gly Thr
95     210                 215                 220
96 Arg Asp Glu Thr Ala Lys Glu Ala Asp Ala Val Asp Val Ser Leu Val
97 225                 230                 235                 240
98 Glu Gly Ser Asn Asp Ile Met Gly Ser Thr Asn Phe Lys Glu Leu Pro
99                 245                 250                 255
100 Gly Arg Glu Gly Asn Arg Val Asp Ala Gly Ser Gln Asn Ala His Gln
101             260                 265                 270
102 Gly Lys Val Glu Phe His Tyr Pro Pro Ala Pro Ser Lys Glu Lys Arg
103         275                 280                 285
104 Lys Glu Gly Ser Ser Asp Ala Ala Glu Ser Thr Asn Tyr Asn Glu Ile
105     290                 295                 300
106 Pro Lys Asn Gly Lys Gly Ser Thr Arg Lys Gly Val Asp His Ser Asn
107 305                 310                 315                 320
108 Arg Asn Gln Ala Thr Leu Asn Glu Lys Gln Arg Phe Pro Ser Lys Gly
109                 325                 330                 335
110 Lys Ser Gln Gly Leu Pro Ile Pro Ser Arg Gly Leu Asp Asn Glu Ile
111             340                 345                 350
112 Lys Asn Glu Met Asp Ser Phe Asn Gly Pro Ser His Glu Asn Ile Ile
```

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Input Set : A:\PTO.txt
Output Set: N:\CRF3\07052001\I700696A.raw

```
113         355                 360                 365
114 Thr His Gly Arg Lys Tyr His Tyr Val Pro His Arg Gln Asn Asn Ser
115     370                 375                 380
116 Thr Arg Asn Lys Gly Met Pro Gln Gly Lys Gly Ser Trp Gly Arg Gln
117 385                 390                 395                 400
118 Pro His Ser Asn Arg Arg Phe Ser Ser Arg Arg Arg Asp Asp Ser Ser
119                 405                 410                 415
120 Glu Ser Ser Asp Ser Gly Ser Ser Ser Glu Ser Asp Gly Asp
121             420                 425                 430
122 <210> SEQ ID NO: 3
123 <211> LENGTH: 4
124 <212> TYPE: PRT
125 <213> ORGANISM: Artificial Sequence
127 <220> FEATURE:
128 <223> OTHER INFORMATION: glycosaminoglycan attachment motif
130 <400> SEQUENCE: 3
131 Ser Gly Asp Gly
132  1
133 <210> SEQ ID NO: 4
134 <211> LENGTH: 7
135 <212> TYPE: PRT
136 <213> ORGANISM: Artificial Sequence
138 <220> FEATURE:
139 <223> OTHER INFORMATION: metalloproteinase cleavage site
141 <400> SEQUENCE: 4
142 Ala Asp Ala Val Asp Val Ser
143  1               5
144 <210> SEQ ID NO: 5
145 <211> LENGTH: 22
146 <212> TYPE: PRT
147 <213> ORGANISM: Homo sapiens
149 <400> SEQUENCE: 5
150 Ser Ser Arg Arg Arg Asp Asp Ser Ser Glu Ser Ser Asp Ser Gly Ser
151  1               5                  10                  15
152 Ser Ser Glu Ser Asp Gly
153             20
154 <210> SEQ ID NO: 6
155 <211> LENGTH: 21
156 <212> TYPE: PRT
157 <213> ORGANISM: Homo sapiens
159 <400> SEQUENCE: 6
160 Ser Ser Arg Ser Lys Glu Asp Ser Asn Ser Thr Glu Ser Lys Ser Ser
161  1               5                  10                  15
162 Ser Glu Glu Asp Gly
163             20
166 <210> SEQ ID NO: 7
167 <211> LENGTH: 14
168 <212> TYPE: PRT
169 <213> ORGANISM: Homo sapiens
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Input Set : A:\PTO.txt
Output Set: N:\CRF3\07052001\I700696A.raw

171 <400> SEQUENCE: 7
172 Asp Ser Ser Glu Ser Ser Asp Ser Gly Ser Ser Ser Glu Ser
173 1 5 10
176 <210> SEQ ID NO: 8
177 <211> LENGTH: 38
178 <212> TYPE: DNA
179 <213> ORGANISM: Artificial Sequence
181 <220> FEATURE:
182 <223> OTHER INFORMATION: primer with overhang linker sequence
185 <400> SEQUENCE: 8
186 gacgacgaca aggtgaataa agaatatagt atcagtaa 38
188 <210> SEQ ID NO: 9
189 <211> LENGTH: 35
190 <212> TYPE: DNA
191 <213> ORGANISM: Artificial Sequence
193 <220> FEATURE:
194 <223> OTHER INFORMATION: primer with overhang linker sequence
197 <400> SEQUENCE: 9
198 ggaacaagac ccgtctagtc accatcgctc tcact 35
200 <210> SEQ ID NO: 10
201 <211> LENGTH: 15
202 <212> TYPE: PRT
203 <213> ORGANISM: Homo sapiens
205 <400> SEQUENCE: 10
206 Asp Asp Ser Ser Glu Ser Ser Asp Ser Gly Ser Ser Ser Glu Ser
207 1 5 10 15
210 <210> SEQ ID NO: 11
211 <211> LENGTH: 16
212 <212> TYPE: PRT
213 <213> ORGANISM: Homo sapiens
215 <400> SEQUENCE: 11
216 Asp Asp Ser Ser Glu Ser Ser Asp Ser Gly Ser Ser Ser Glu Ser Asp
217 1 5 10 15
220 <210> SEQ ID NO: 12
221 <211> LENGTH: 22
222 <212> TYPE: PRT
223 <213> ORGANISM: Homo sapiens
225 <400> SEQUENCE: 12
226 Ser Ser Arg Arg Arg Asp Asp Ser Ser Glu Ser Ser Asp Ser Gly Ser
227 1 5 10 15
228 Ser Ser Glu Ser Asp Gly
229 20
232 <210> SEQ ID NO: 13
233 <211> LENGTH: 14
234 <212> TYPE: PRT
235 <213> ORGANISM: Homo sapiens
237 <400> SEQUENCE: 13
238 Asp Ser Ser Asp Ser Ser Asp Ser Ser Ser Ser Ser Asp Ser
239 1 5 10

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PATENT APPLICATION: US/09/700,696A TIME: 10:42:17

Input Set : A:\PTO.txt
Output Set: N:\CRF3\07052001\I700696A.raw

```
242 <210> SEQ ID NO: 14
243 <211> LENGTH: 15
244 <212> TYPE: PRT
245 <213> ORGANISM: Homo sapiens
247 <400> SEQUENCE: 14
248 Asp Asp Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser
249  1               5                  10                  15
252 <210> SEQ ID NO: 15
253 <211> LENGTH: 14
254 <212> TYPE: PRT
255 <213> ORGANISM: Homo sapiens
257 <400> SEQUENCE: 15
258 Asp Ser Ser Asp Ser Ser Asp Ser Asn Ser Ser Ser Asp Ser
259  1               5                  10
262 <210> SEQ ID NO: 16
263 <211> LENGTH: 14
264 <212> TYPE: PRT
265 <213> ORGANISM: Homo sapiens
267 <400> SEQUENCE: 16
268 Asp Ser Ser Glu Ser Ser Asp Ser Ser Asn Ser Ser Asp Ser
269  1               5                  10
272 <210> SEQ ID NO: 17
273 <211> LENGTH: 14
274 <212> TYPE: PRT
275 <213> ORGANISM: Homo sapiens
277 <400> SEQUENCE: 17
278 Asp Ser Ser Asp Ser Ser Asp Ser Ser Asn Ser Ser Asp Ser
279  1               5                  10
282 <210> SEQ ID NO: 18
283 <211> LENGTH: 16
284 <212> TYPE: PRT
285 <213> ORGANISM: Homo sapiens
287 <400> SEQUENCE: 18
288 Asp Asp Ser His Gln Ser Asp Glu Ser His His Ser Asp Glu Ser Asp
289  1               5                  10                  15
292 <210> SEQ ID NO: 19
293 <211> LENGTH: 11
294 <212> TYPE: PRT
295 <213> ORGANISM: Homo sapiens
297 <400> SEQUENCE: 19
298 Ser Asp Glu Ser His His Ser Asp Glu Ser Asp
299  1               5                  10
302 <210> SEQ ID NO: 20
303 <211> LENGTH: 11
304 <212> TYPE: PRT
305 <213> ORGANISM: Homo sapiens
307 <400> SEQUENCE: 20
308 Ser Asp Ser Ser Ser Ser Ser Asp Ser Ser Asp
309  1               5                  10
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VERIFICATION SUMMARY DATE: 07/05/2001
PATENT APPLICATION: **US/09/700,696A** TIME: 10:42:18

Input Set : **A:\PTO.txt**
Output Set: **N:\CRF3\07052001\I700696A.raw**

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date